

REMARKS

Claim Amendments

Claims 1 and 23 were amended to include the limitations of claims 8 and 30 respectively.

Molecular Weight and 35 U.S.C. § 112

Molecular weight and density are not interchangeable; equating “high molecular weight” and “medium molecular weight” with “high density” is improper.

The 35 U.S.C. § 112 rejection of paper 20070409 states: “The phrases ‘high molecular weight’ and ‘medium molecular weight’...will be interpreted as to be directed to 52-68% wt% high density polyethylene.” Equating molecular weight with density is inappropriate, contextually, molecular weight is usually defined in Daltons or grams per mole. Density is not a reliable predictor of molecular weight. It follows that equating molecular weight and density is improper. Further, it is improper to ignore claim limitations. See Pennwalt Corp., 833 F.2d 931 at 935. (Finding that the claim limitations in effect specifically exclude other subject matter).

In a larger sense, medium molecular weight has art accepted meanings ranging from about 100,000-180,000 and high molecular weight ranges from 250,000-750,000 (see Cycletime Tips - General Volume 36: High Density Polyethylene, Freitag, Royce). It appears that paper 20070409 declines to differentiate between high molecular weight (HMW) and medium molecular weight (MMW). Admittedly, no “exact molecular weight ranges” has been defined, however, even in the absence of an exact molecular weight range, medium molecular weight polyethylene is not identical to high molecular weight polyethylene, and the currently pending rejection is based on a high molecular weight polyethylene. The medium molecular weight polyethylene has been adequately defined in terms of its density and melt index. Referring now

to page 8 of paper 20070409 states that the “dimensions of the differences are not clearly defined because of the absence of explicitly defined values.” Applicant is unclear on what authority the Office relies on for the proposition that all values must be explicitly defined.

Applicant further notes that the *Williams* reference (5,078,667) is drawn to a high molecular weight high density polyethylene (HMW-HDPE) see column 6 at line 40 et. seq. The identified products, Alathon L5005 and Hostalen GM 9255 HP both are HMW-HDPE products. Applicant also respectfully notes that the provided specification sheets differentiate between HMW and MMW (see appendices of Applicants paper dated August 11, 2006). Even without an explicitly defined value for “high” or “medium” the differences in molecular weight are meaningful. *Williams* simply does not teach the currently claimed combination, in any of multiple areas. By way of example, the reference teaches only HMW-HDPE, the claims require HMW-HDPE and MMW-HDPE. *Williams* does not teach HDPE with MMW. *Williams* teaches HMW-HDPE, under any definition “high” is not the same as “medium.” Since *Williams* requires 65-90 wt% HMW-HDPE and the present invention only requires 40-48 wt% HMW-HDPE *Williams* fails to disclose the claimed composition of HMW-HDPE.

Additionally, *Williams* is completely silent as to the presence of MMW-HDPE. The present claims require 12-20 wt % MMW-HDPE. This is not taught, either explicitly or implicitly, by the *Williams* reference. The specification and the claims both provide characteristics of MMW-HDPE in terms of melt index and density, both of which are industry accepted material characteristics.

Further, even accepting, *arguendo*, that that the adjectives disclosing the molecular

weights does not provide an exact value, it does provide a different value. The rejection fails to contextually provide a reference teaching the mixture of molecular weights.

Claim Rejections – 35 USC §103

The Examiner stated “*Claims 1, 4 -23 and 26 -42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (U.S. Patent No. 6,435,350) in view of Williams (U.S. Patent No. 5,078,677).*”

With regard to Claim 1, 7 - 8 and 29 - 30, Huang et al. disclose a self- opening bag stack (bag pack; column 7, lines 32 - 33) comprising a plurality of stacked bags (column 11, lines 40 - 44) which is a film bag (column 17, line 46); the bags are frangibly bonded (column 7, lines 53 - 55), and are therefore releasably adhered in substantial registration (column 5, lines 35 - 38); each of the bags include front and rear film walls (column 7, lines 38 - 40) having first and second side edges, a top edge and a bottom edge (column 7, lines 40 - 44), the front and rear walls integrally joined at the first and second side edges (joined together by pleated side walls; column 7, lines 40 - 44) and secured together at their bottom edges (by sealing; column 7, lines 40-44) and defining an open mouth portion adjacent the top edges (column 7, lines 38 - 40); the entire outer surface of the bag is corona treated (column 2, lines 5 - 9); the bag comprises plastic (column 12, line 53); Huang et al. fail to disclose a bag comprising 52 - 68 wt.% high density polyethylene and 20-30 wt. % linear low density polyethylene.

Williams teaches a bag (column 3, lines 30 - 32) comprising 52 - 68 wt.% high density polyethylene and 20 - 30 wt. % linear low density polyethylene (column 6, lines 12 - 20) for the purpose of obtaining a bag which is produced without stress relief notches (column 3, lines 28). One of ordinary skill in the art would therefore have recognized the advantage of providing for

the composition of Williams in Huang et al, which comprises a bag, depending on the desired production of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a bag comprising 52 - 68 wt.% high density polyethylene and 20 - 30 wt. % linear low density polyethylene in Huang et al. in order to obtain a bag which is produced without stress relief notches as taught by Williams."

With regards to Claim 1, the bags of the present invention are comprised of about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene. The Examiner has cited the combination of *Huang et al.* and *Williams*. *Williams* describes a plastic bag having a 65-90 wt.% high molecular weight, high density polyethylene and 5-30 wt. % linear low density polyethylene composition. *Williams* discloses a higher wt. % composition of high density high molecular weight polyethylene than the present invention (about 40-48 wt. % high density, high molecular weight polyethylene). More importantly, *Williams* does not disclose the use of high density, medium molecular weight polyethylene, a key ingredient in the present invention. As all of the elements necessary to construct the present invention are not present in either of the suggested references, Claim 1 cannot be found obvious over *Huang et al.* in view of *Williams*. Therefore, Claim 1 should be allowable. As Claims 2-22 depend, directly or indirectly, from Claim 1, they should likewise be allowable. Claim 23 also includes the element "12-20 wt. % high density, medium molecular weight polyethylene," an element not found in *Williams* as described by the Examiner. Thus Claim 23 should be allowable. Likewise, Claims 24-42, which depend from Claim 23 should also be allowable.

The Examiner stated *“With regard to Claims 4 and 26, the bags disclosed by Huang et al are recyclable (column 1, lines 35 — 40) Huang et al fail to disclose bags that comprise 10 — 20 wt % recycled material; however, Huang et al disclose bags that are recyclable or disposable by incineration (column 1, lines 35 — 40) and therefore disclose the selection of the amount of recycled material depending on the desired amount of necessary incineration. Therefore, one of ordinary skill in the art would have recognized the utility of varying the amount of recycled material to obtain the desired amount of incineration. Therefore, the amount of incineration would be readily determined by through routine optimization of the amount of recycled material by one having ordinary skill in the art depending on the desired use of the end product as taught by Huang et al.*

It therefore would be obvious for one of ordinary skill in the art to vary the amount of recycled material in order to obtain the desired amount of incineration, since the amount of incineration would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Huang et al.

Applicant does not accept the suggestion because a person could hypothetically optimize a composition for incineration that it would follow that they could optimize for adhesive properties. Further, there must be some suggestion in the references suggesting that it would be desirable to optimize recycled content without an associated deleterious effect on adhesive properties. There is also nothing to suggest that the optimization for incineration would serve to optimize adhesive properties. The issue here is not whether the bags can be incinerated, but whether they will still have their adhesive properties with a given percentage of recycled material. The Applicant has determined that use of 10-20 wt. % recycled material comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density,

medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene and 0-8 wt. % color concentrate will still allow the bags produced to have the required adhesion and thus the necessary self-opening capability. As the elements described in Claims 4 and 26 are not disclosed in *Huang* and as this reference does not provide the functional features resulting from these elements, it would not be obvious to vary the ingredients of *Huang* to achieve the present invention.

The Examiner stated “*With regard to Claims 5 and 27, the linear low density polyethylene taught by Williams has a density of 0.93 or less (column 6, lines 60 -62); Williams therefore teaches a linear low density polyethylene in which 10 -15 wt. % has a density ranging from 0.923 -0.924 gm/cc.*

With regard to Claims 6 and 28, the linear low density polyethylene taught by Williams has a melt index of 0.930 or less (column 7, line 3); Williams therefore teaches a linear low density polyethylene in which 10-15 wt. % has a melt index ranging from 0.25 -0.30 gm/10 minutes.

With regard to Claims 9, 15, 18, 31, 35 and 38, the stack taught by Huang et al comprises a cold staking area piercing and extending transversely through the bag stack for maintaining the bags in the bag stack in substantial registration (cold pin bonding; column 14, line 34).

With regard to Claims 10, 16, 19, 32, 36 and 39, the stack taught by Huang et al comprises a hot melt pin area piercing and extending transversely through the bag stack for maintaining the bags in the bag stack in substantial registration (hot pin welds; column 15, lines 33-35).

With regard to Claims 11 and 33, each of the bags disclosed by Huang et al includes longitudinally oriented side gussets (pleated side walls; column 7, lines 39 -40).

With regard to Claims 12, 14, 34 and 37, Huang et al disclose a dispensing rack having horizontal arms (projections; column 10, line 29-31; Figure 10), and a pin area piercing as stated above; Huang et al therefore disclose first and second opening penetrating and extending transversely through the bag stack in an upper portion of the bags and spaced downwardly from the top edge, spaced inwardly from the first and second side edges and serving to support the bag stack on horizontal arms of a dispensing rack.

With regard to Claim 13, the bags disclosed by Huang et al. comprise an upper seam sealing the front wall to the rear wall to the respective top edges (column 2, lines 13-15) and a U-shaped cut -out disposed in an upper portion of the bag and commencing at a first point along the upper seam spaced inwardly from the first side edge and extending to a second point along the upper seam inwardly from the second side edge, the cut -out extending downwardly toward the bottom edges, thereby forming an open mouth portion and a pair of bag handles (column 7, lines 30-46; Figure 1).

With regard to Claims 17, the bag disclosed by Huang et al. comprises a central tab portion connected to the open mouth portion of the bags in the bag stack (column 7, lines 46 -48) and an aperture extending transversely through the bag stack within the central tab portion for suspending the bag stack from a dispensing member (suspension aperture (column 14, lines 43 - 45).

With regard to Claims 20-21 and 40-41, the central tab portion of each bag disclosed by Huang et al is detachably connected to said open mouth portion of the bags (a tab aperture, the bags being held together by frangible bond; the central tab portion of each bag therefore

includes a frangible section, the frangible section extending from the aperture to an outer edge of the central tab portion and the frangible portion rupturing upon removal of the bag from the dispensing member).

With regard to Claims 22 and 42, the entire outer surface of the bag disclosed by Huang et al. is corona treated, as stated above, and therefore has a surface tension on the corona treated surface of at least 38 dynes.

With regard to Claim 23, the bag disclosed by Huang et al. is a t-shirt type bag (column 7, lines 40-41) and has laterally spaced upwardly extending bag handles, an open mouth portion between the handles and central support tab portion extending upwardly from the open mouth portion (column 7, lines 45 -48; Figure 1).

Claims 2-3 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (U.S. Patent No. 6,435,350) in view of Williams (U.S. Patent No. 5,078,677) and further in view of Mawson et al. (U.S. Patent Publication No. 2002/0107342).

Huang et al. and Williams discloses a bag as discussed above. With regard to Claims 2 - 3 and 24-25, Huang et al. and Williams fail to disclose a bag comprising 0.5 wt. % slip and antiblock compound and 1-3 wt. % calcium carbonate.

Mawson et al. teach a bag (paragraph 390) comprising 0.5 wt. % slip and antiblock compound and 1 -3 wt. % calcium carbonate (paragraph 394) for the purpose of obtaining a bag for heavy duty use (paragraph 390). One of ordinary skill in the art would therefore have recognized the advantage of providing for the slip and antiblock compound and calcium carbonate of Mawson et al. in Huang et al. and Williams, which comprises a bag, depending on the desired use of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for 0.5 wt. % slip and antiblock compound and 1-3 wt. % calcium carbonate in Huang et al. and Williams in order to obtain a bag for heavy duty use as taught by Mawson et al.

The suggestion that a generalized disclosure of over 30 possible additives in amounts covering five orders of magnitude is sufficient to maintain a rejection on a specific quantity is improper. The suggestion that a disclosure of 30 possible additives in amounts covering five orders of magnitude is sufficient to justify selecting the specifically claimed values is improper hindsight. While the "suggestion test" is not a rigid categorical rule. The motivation for making the claimed combination "need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself." Dystar Textilfarben GmbH v. C.H. Patrick Co., 464 F.3d 1356 (Fed. Cir. 2006). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727 (U.S. 2007) quoting In re Kahn, 441 F.3d 977, 988 (CA Fed. 2006).

The currently pending rejection is based solely on conclusory statements. There is simply no articulated reasoning as to why one of ordinary skill in the relevant art would make the claimed combination from the thousands of possible variations that Mawson discloses.

With respect to amended claims 1 and 23, the claim limitation of claims 8 and 30 respectively have been incorporated into the claims. The added limitations further define the properties of the high density, medium molecular weight polyethylene.

All of the Claims discussed here depend from Claim 1 or Claim 23, directly or indirectly. As Claims 1 and 23 should be allowable, as discussed *supra*, all claims should likewise be allowable.

Based upon the above arguments, Applicant urges that the application is now in condition for allowance. All necessary fees are included herewith.

Respectfully submitted,

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